

AD-A018 378

SPECIAL DATA COLLECTION SYSTEM EVENT REPORT.  
NTS EVENT 'TYBO', 14 MAY 1975

J. R. Woolson, et al

Teledyne Geotech

Prepared for:

Defense Advanced Research Projects Agency  
Air Force Technical Applications Center

September 1975

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ADA018378

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**NTS Event "TYBO", 14 May 1975**

**J.R. Woolson, O.O. Solari, D.J. Reinbold, and R.J. Markle**  
**Alexandria Laboratories**

**Teledyne Geotech, 314 Montgomery Street, Alexandria, Virginia 22314**

**September 1975**

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**ARPA Order No. 2897**

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER SDCS-ER-75-10	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) SPECIAL DATA COLLECTION SYSTEM (SDCS) NTS Event "TYBO", 14 May 1975		5. TYPE OF REPORT & PERIOD COVERED Technical
7. AUTHOR(s) Woolson, J. R., Solari, D. D., Reinhold, D. J., and Markle, R. J.		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS Alexandria Laboratories 314 Montgomery Street Alexandria, Virginia 22314		8. CONTRACT OR GRANT NUMBER(s) F08606-74-C-0013
11. CONTROLLING OFFICE NAME AND ADDRESS Defense Advanced Research Projects Agency Nuclear Monitoring Research Office 1400 Wilson Blvd.-Arlington, Virginia 22209		10. PROGRAM ELEMENT PROJECT, TASK AREA & WORK UNIT NUMBERS T/4703
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) VELA Seismological Center 312 Montgomery Street Alexandria, Virginia 22314		12. REPORT DATE 8 September 1975
		13. NUMBER OF PAGES <del>21</del> 23
		15. SECURITY CLASS. (of this report) Unclassified
		15a. DECLASSIFICATION DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)  APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)		

DD FORM 1473 1 JAN 73

EDITION OF 1 NOV 65 IS OBSOLETE

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SDCS Event Report No. 10

NTS Event "TYBO", 14 May 1975

This event report contains seismic data from the Special Data Collection System (SDCS), and other sources for the above event. Published epicenter information from seismic observations is:

	Origin Time	Latitude	Longitude	$m_b$	$M_s$
NORSAR	14:00:05	38 N	116 W	5.7	N/A
LASA	14:00:23	38.3N	114.9W	5.5	N/A
Hagfors Array, Sweden	14:00:38	43 N	112 W	6.4	4.7

Using SDCS stations, LASA and NORSAR, the epicenter location becomes

SDCS & Arrays	14:00:02	37.3N	116.5W	5.7	4.4
---------------	----------	-------	--------	-----	-----

All SDCS stations were operational for this event.

Severe instrument pulsing on the long-period vertical channel at HN-ME prevented analysis. Also at HN-ME, the long-period radial calibration was distorted. The Love wave was clipped at RK-ON and tape noise caused the short-period vertical travel body wave amplitudes to be questionable. The Rayleigh wave was clipped at FN-WV and the true orientation of all FN-WV horizontal channels is unknown.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response) with the exception of LASA and NORSAR short-period plots. LASA SP scaling factors are millimicrons per inch. Scaling factors are not reported for NORSAR short-period.

# STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES DEG MN SECS	ELEVATION METERS	INSTRUMENTATION	
				SHORT-PERIOD	LONG-PERIOD
ALPA	Alaska	65 14 00.0 N 147 44 36.0 W	626	None	31300
CPSO	McMinnville, Tennessee	35 35 41.4 N 085 34 13.5 W	574	6480 V 7515 H	SL210 V SL220 H
FN-WV	Franklin, West Virginia	38 52 58.0 N 079 50 47.0 W	910	KS36000	KS36009
LASA	Billings, Montana	46 41 19.0 N 106 13 20.0 W	744	HS10	7505A V 8700C H
HN-ME	Houlton, Maine	46 09 43.0 N 067 59 09.0 W	213	18300	SL210 V SL220 H
NORSAR	Kjeller, Norway	60 49 25.4 N 010 49 56.5 E	379	HS10	7505A V 8700C H
RK-ON	Red Lake, Ontario	50 50 20.0 N 095 40 20.0 W	566	18300	SL210 V SL220 H
WH2YK	White Horse, Yukon	60 41 41.0 N 134 58 02.0 W	853	18300	SL210 V SL220 H

# HYPOCENTER DETERMINATION

INPUT FOR EVENT 14 MAY 75  
14:00:00.0 37.000N 116.000W 0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CAIC	REST		
LAC	14 02 54.8	-0.4	0.3	12.1	35.7
PK-CN	14 04 47.3	0.6	-0.4	21.2	42.9
CPO	14 05 25.7	-0.0	0.8	24.9	84.4
WHZYK	14 05 38.5	0.6	1.2	26.2	330.3
PN-WV	14 06 03.2	0.0	0.2	29.1	76.0
HN-ME	14 07 10.1	0.6	-0.0	36.8	60.4
NAD	14 11 31.3	-1.3	-2.2	73.2	24.0

## 67 HEPPIV TRAVEL TIME TABLES

ORIGIN	LAT.	LONG.	DEPTH (KM)	SDV	IT	STA
14:00:14.5	37.733N	116.108W	82. CALC	0.7	4	7
14:00:01.7	37.259N	116.461W	0. REST	1.1	3	7

CAIC

1	.	1
0	.	0
0	0.	3
0	.	0
0	0.	0
0	.	0
0	0.	0

REST

1	.	1
0	.	0
0	0.	3
0	.	0
0	0.	0
0	.	0
0	0.	0

CHI2 COVERAGE ELLIPSE: 95 PER CENT CONF..LEVEL, SDV= 1.68  
MAJOR 61.9KM. MINOR 37.9KM. A7= 30 AREA= 7361 SQ.KM. REST



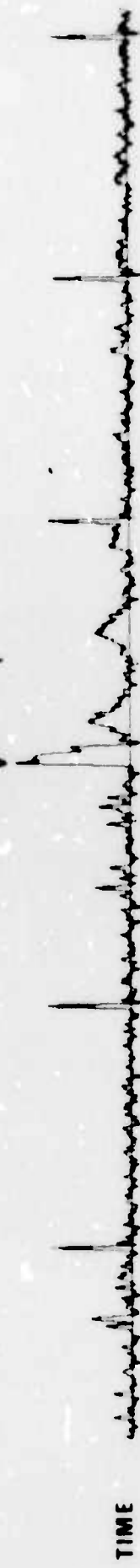
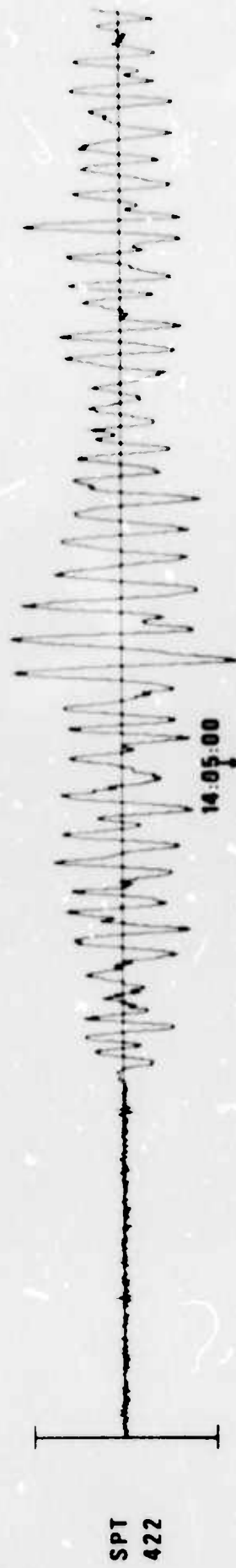
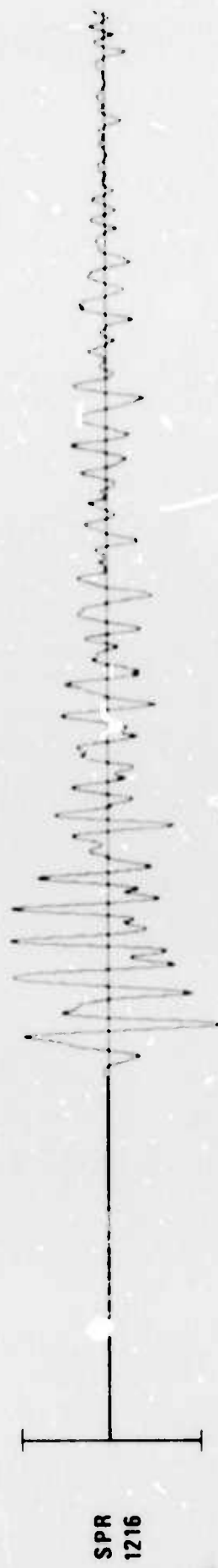
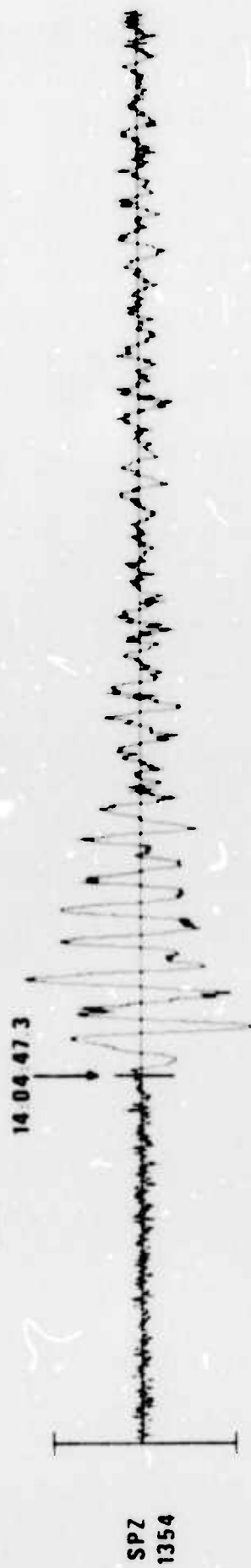
# DATA SUMMARY

INPUT FOR EVENT 14 MAY 75  
14:00:00.0 37.000N 116.000W 0KM.

STA.	PHASE	ARRIVAL		INST	PER	A/Z	MAGNITUDE		DIP	DIST
		TIME					MB	MS		
LAC	EP	14 02 54.8		SPZ	0.6					
LAC	LR	14 07 55.0		LPZ	14.0					12.1
PK-ON	EP	14 04 47.3		SPZ	1.4					
PK-ON	LQ	14 12 53.0		LPT	16.0	9999.				
PK-ON	LR	14 13 42.0		LPZ	13.0	1605.		5.65		21.2
CPO	EP	14 05 25.7		SUM	0.8	1317.	6.29			24.9
CPO	LQ	14 13 45.0		LPT	17.0	769.				
CPO	LR	14 15 28.0		LPZ	14.0	1615.		5.72		24.9
WH2YK	EP	14 05 38.5		SPZ	0.9	210.	5.44			26.2
WH2YK	LQ	14 14 47.0		LPT	22.0	210.				
WH2YK	LR	14 16 55.0		LPZ	15.0	906.		5.50		26.2
PN-WV	EP	14 06 03.2		SPZ	1.4	218.	5.64			29.1
PN-WV	LQ	14 15 58.0		LPT	18.0	286.				
PN-WV	LR	14 18 05.0		LPZ	18.0	9999.				29.1
ALPA	LR	14 19 51.0		LAB	22.0	83.		4.56		33.5
HN-ME	EP	14 07 10.1		SPZ	1.4	139.	5.37			36.8
HN-ME	LQ	14 19 59.0		LPT	19.0	35.				
HN-ME	E	14 22 36.0		LPR	17.0					
NAO	EP	14 11 31.3		AB	0.9	156.	5.77			73.2
NAO	LR	14 42 07.0		LAB	23.0	22.		4.33		73.2

ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STA	LP MAG	LP SDV	LP STA
14:00:14.5	37.733N	116.108W	82. CALC	5.59	0.28	5	4.44	0.2	2
14:00:01.7	37.259N	116.461W	0. BEST	5.70	0.37	5	4.45	0.2	2

RK-ON 14 MAY 75



10 SEC

6.



CPS0 14 MAY 75

SPZ  
1107

14.05.25.7

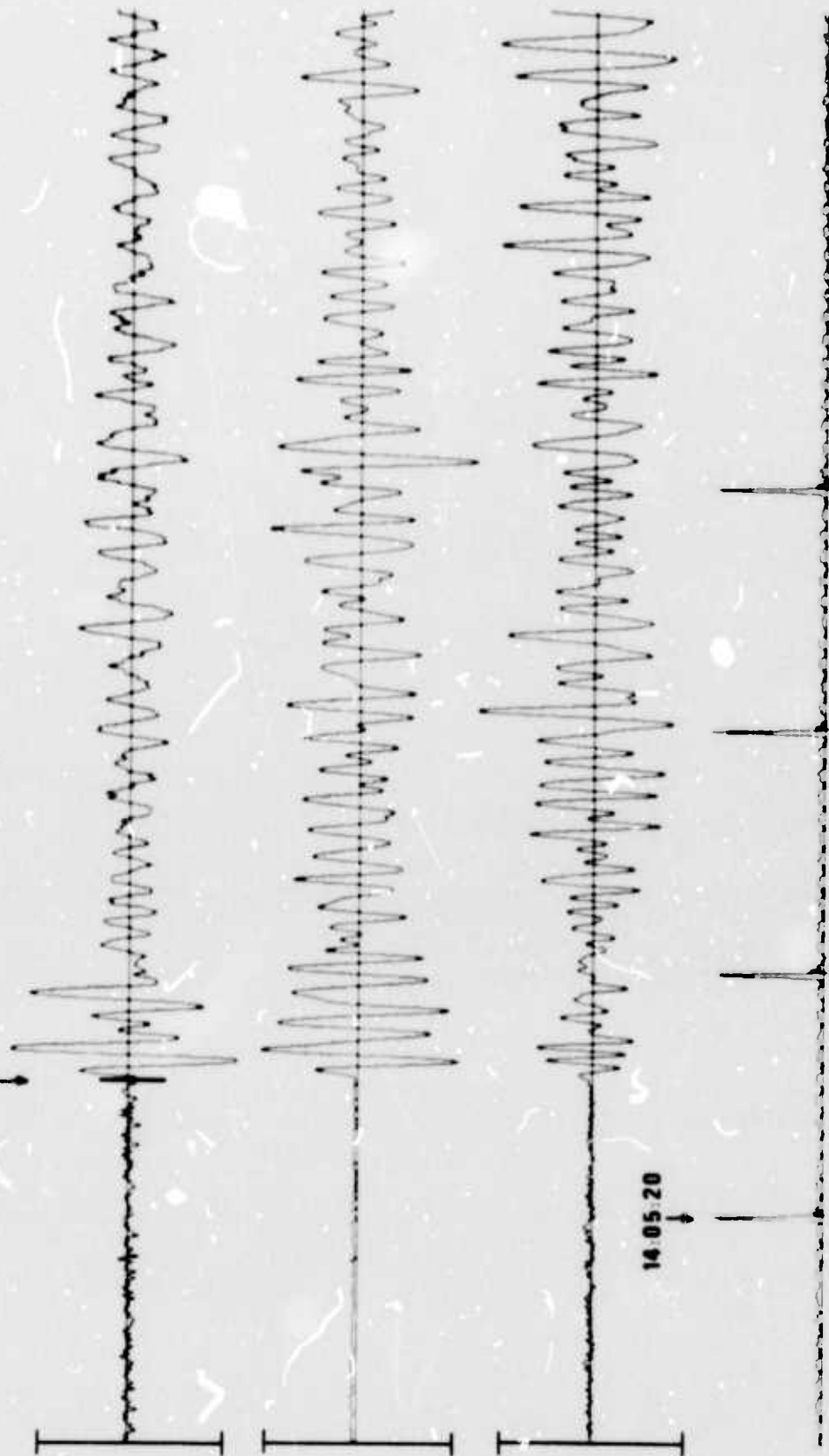
SPR  
376

SPT  
241

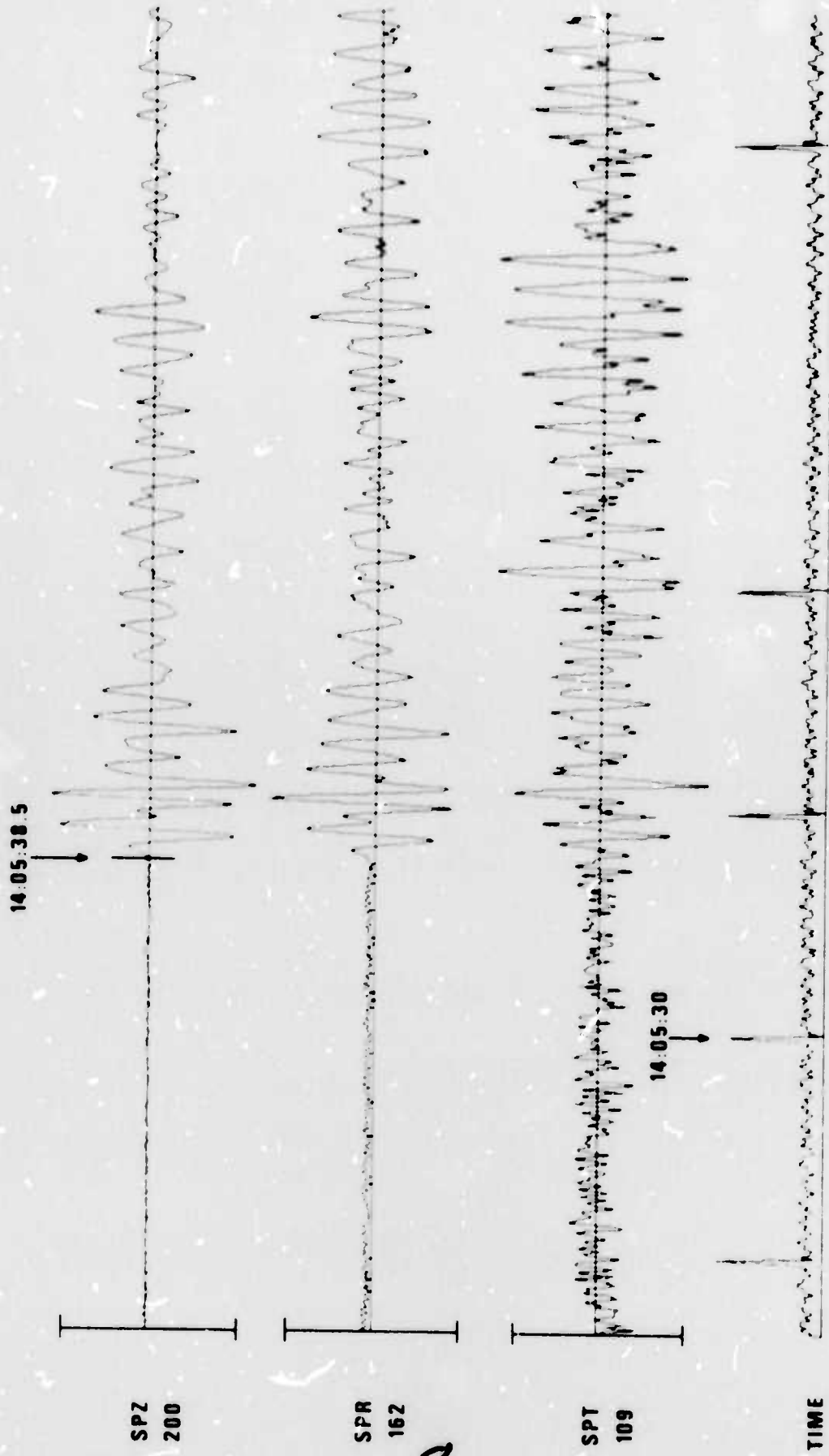
14.05.20

TIME

10 SEC



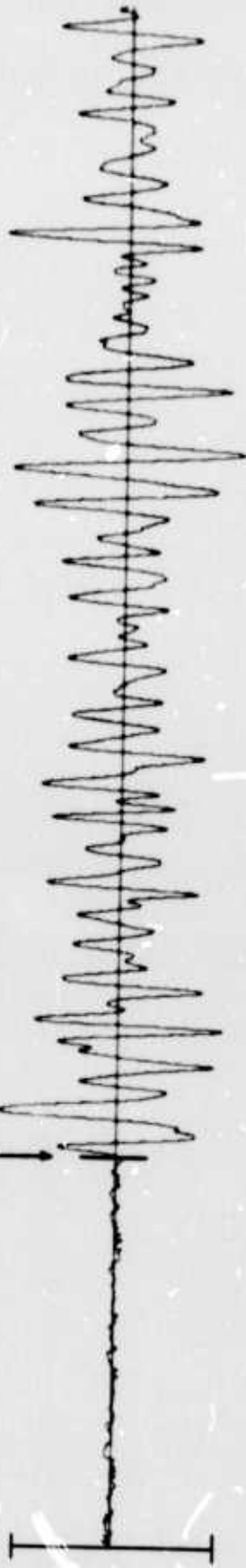
WH2YK 14 MAY 75



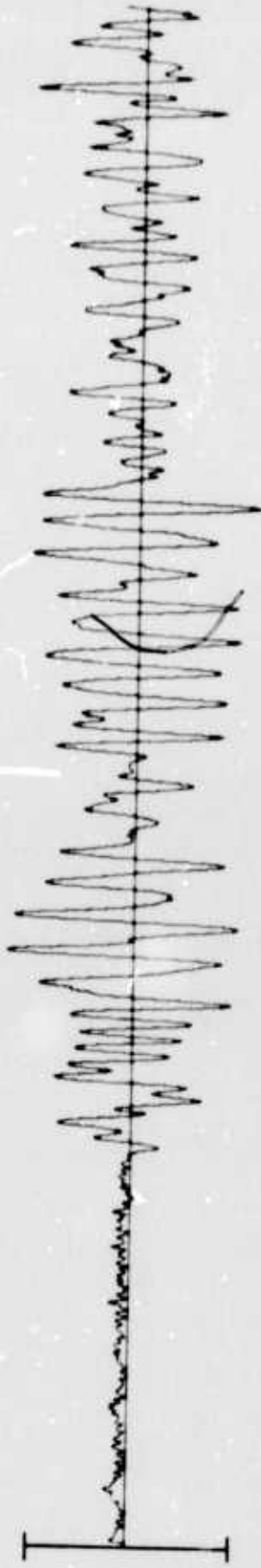
FN-WV 14 MAY 75

14:06:03.2

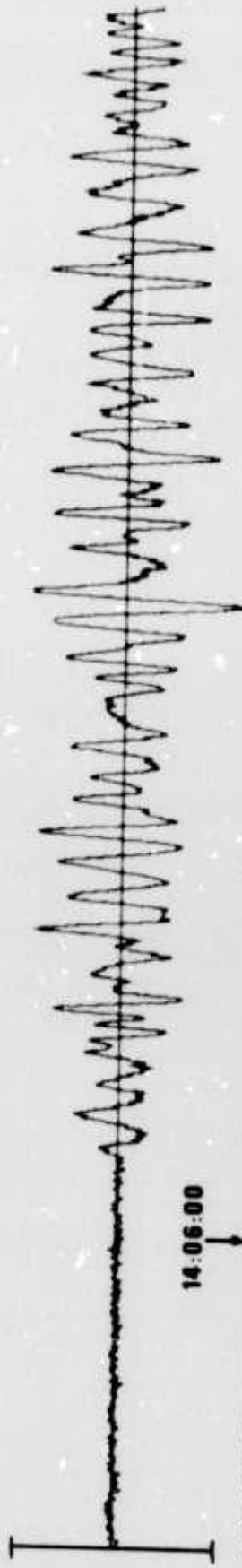
SPZ  
166



SPR  
113

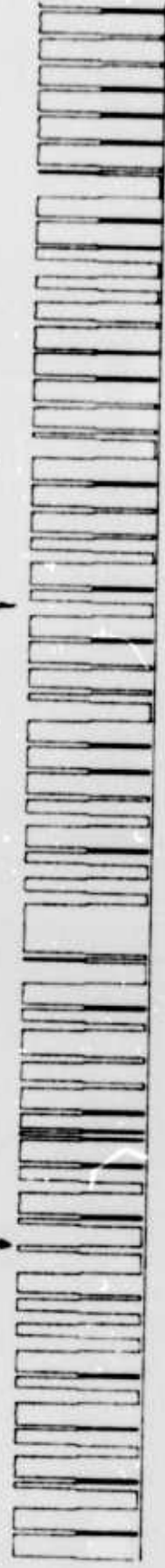


SPT  
126



14:06:00

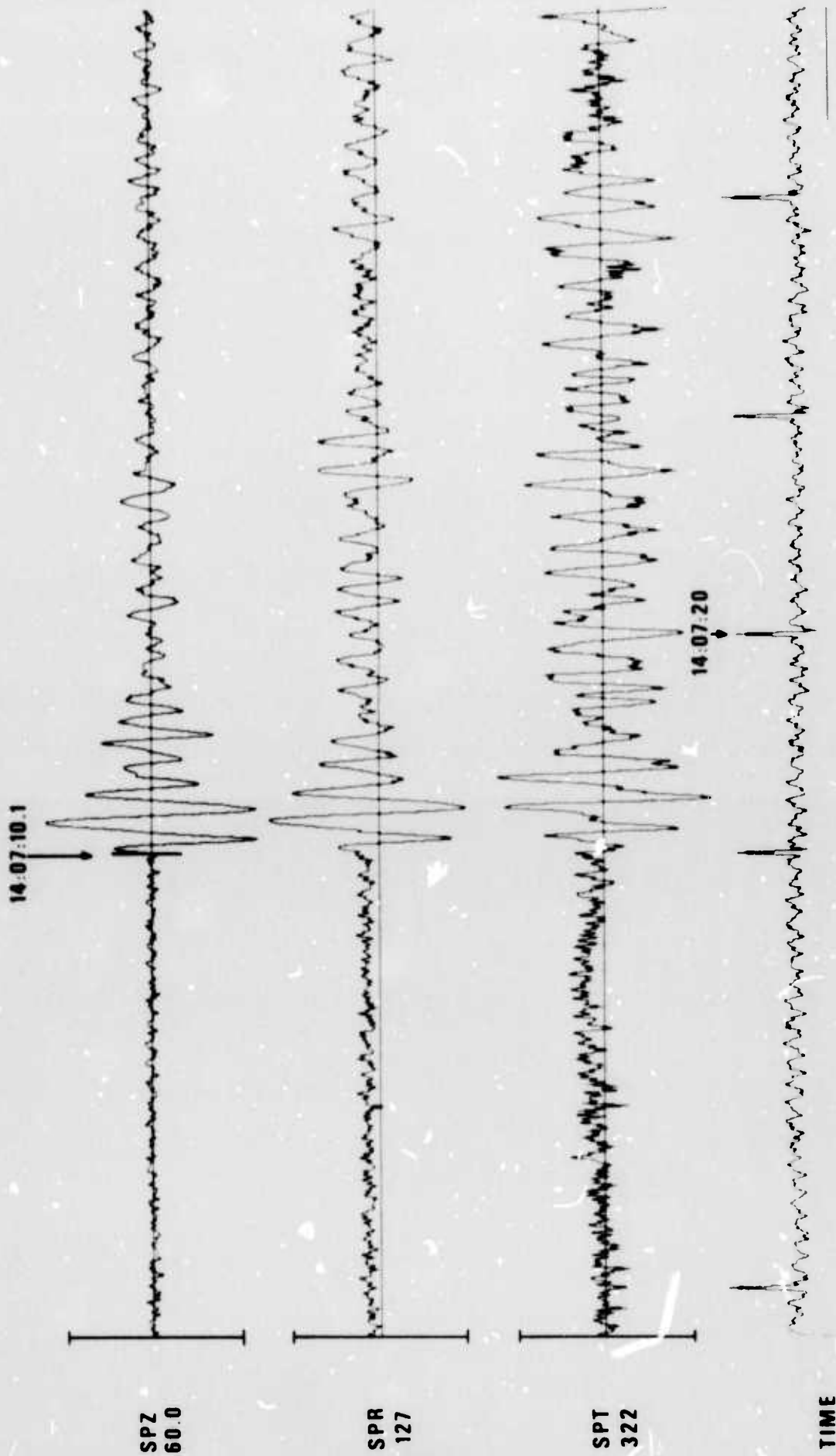
TIME



10 SEC

9.

HN-ME 14 MAY 75



10.



LASA

1 14 MAY 1975

2 14 0 23 38.2N 114.9W

3 14 2 54.7 LAO P

OG D 5.8 37 NEVADA

192.4 1.1 6.2 10.6 220.7

EPX 87262

BP-6 0.6-2.0 HZ

ABN 50

14:02:44.7

AB 250

FAB 230

PAB1 230

PAB2 250

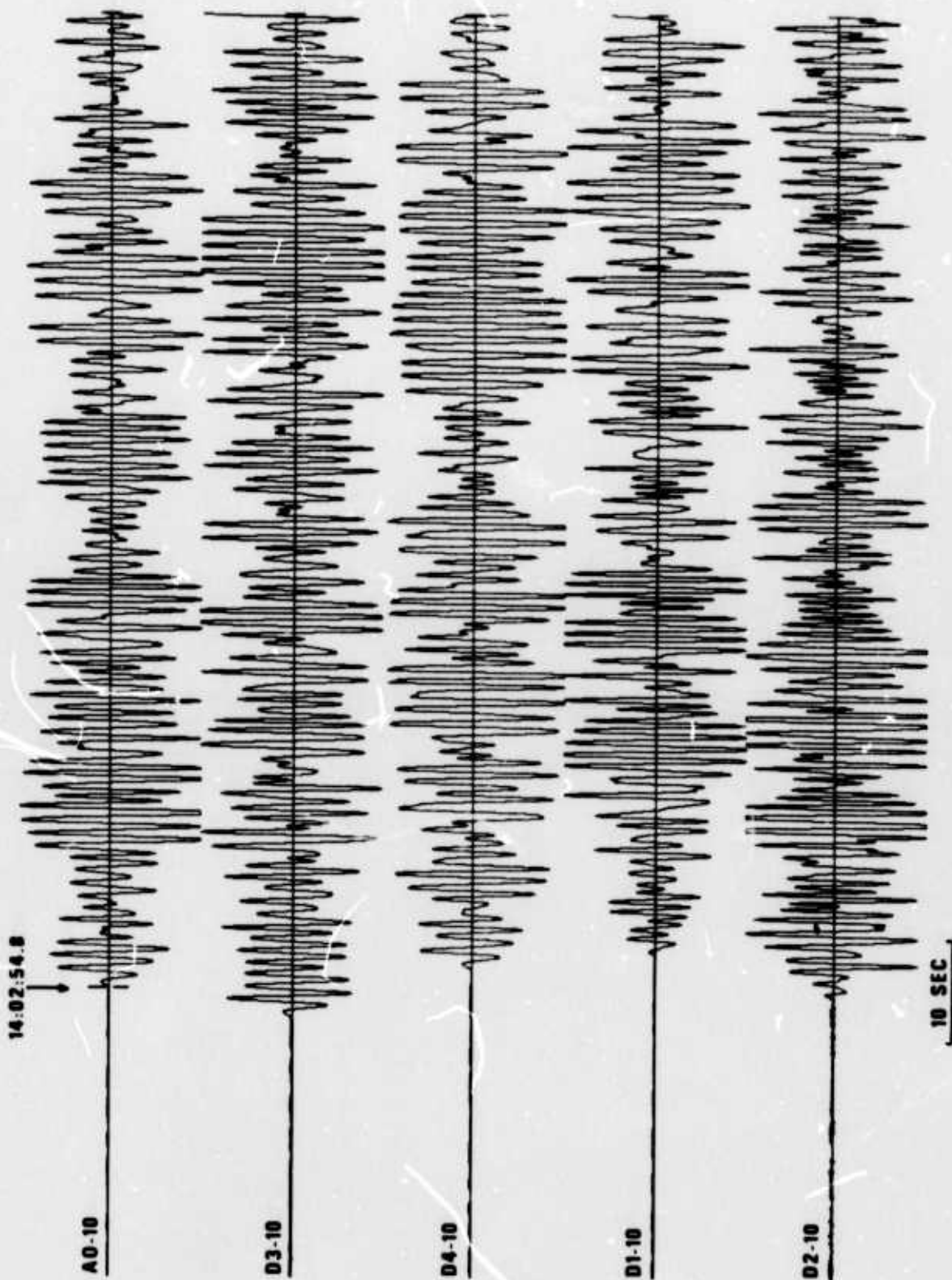
PAB3 210

PAB4 310

10 sec

//.

LASA (INDIVIDUAL SHORT-PERIOD INSTRUMENTS) 14 MAY 75



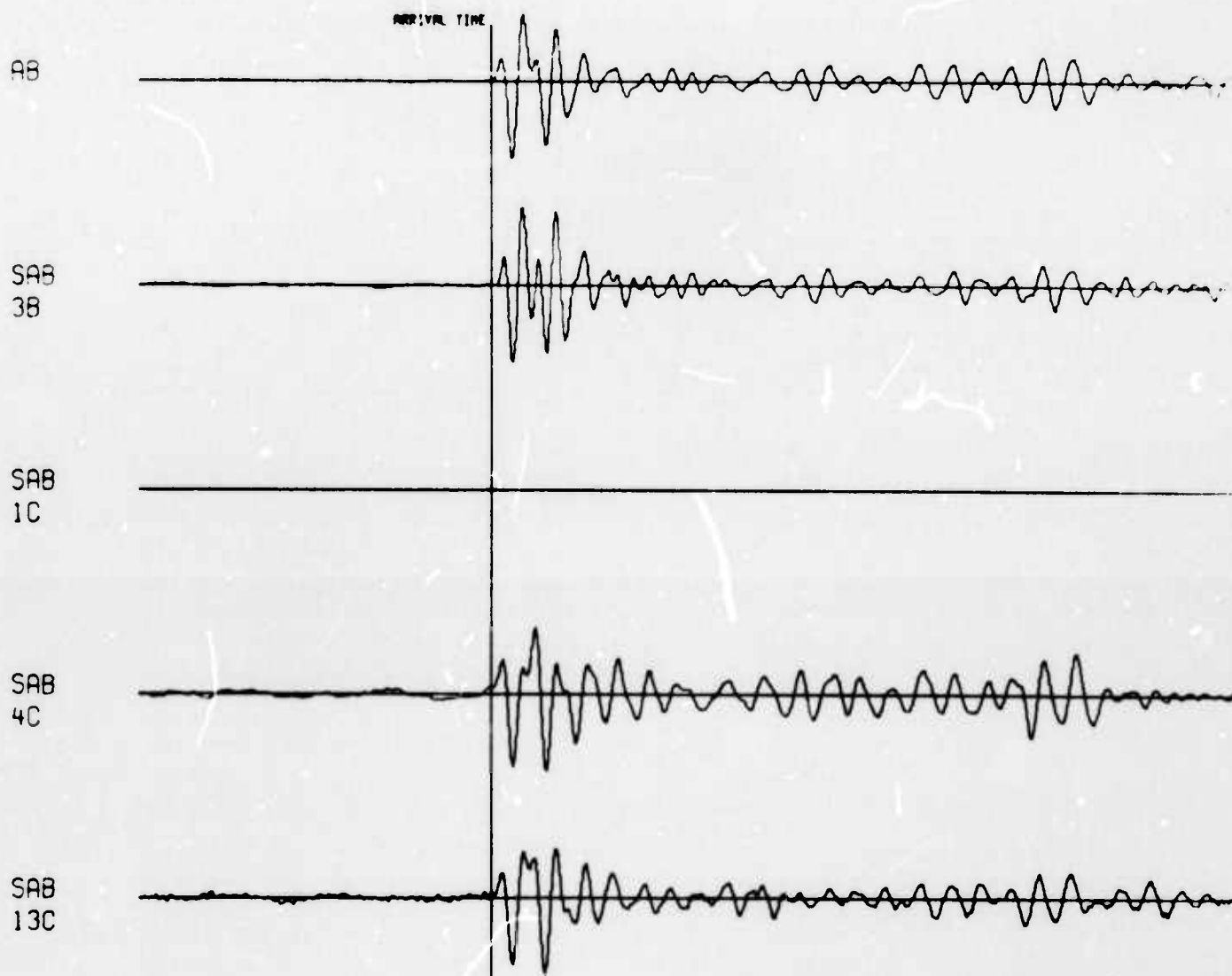
(NO AMPLITUDE DETERMINATIONS MADE DUE TO UNRESOLVED SCALING PROBLEMS)

NORSAR EVENT FILE 1975 MAY 14

EPX NO. 43940 ARR. 14.11.31.3 38.2N 115.6W 5.7MB 33KM

DIST = 72.1 AZI = 318.2 AMP = 108.3 PER = 1.3 UMETH 2

— = 5 SECONDS



NORSAR WESTERN NORTH AMERICA SUBARRAY BEAMS TRANSMITTED ONLINE

3C

7C

13C

14-11-21

10 sec

INTERRUPTED TRANSMISSION

THIS PRESENTATION HAS TESTED VALIDITY ONLY FOR RELATIVE SUBARRAY ARRIVAL TIME

14.



RK-ON 14 MAY 75

LPZ  
7813

14 13 42

LPB  
559

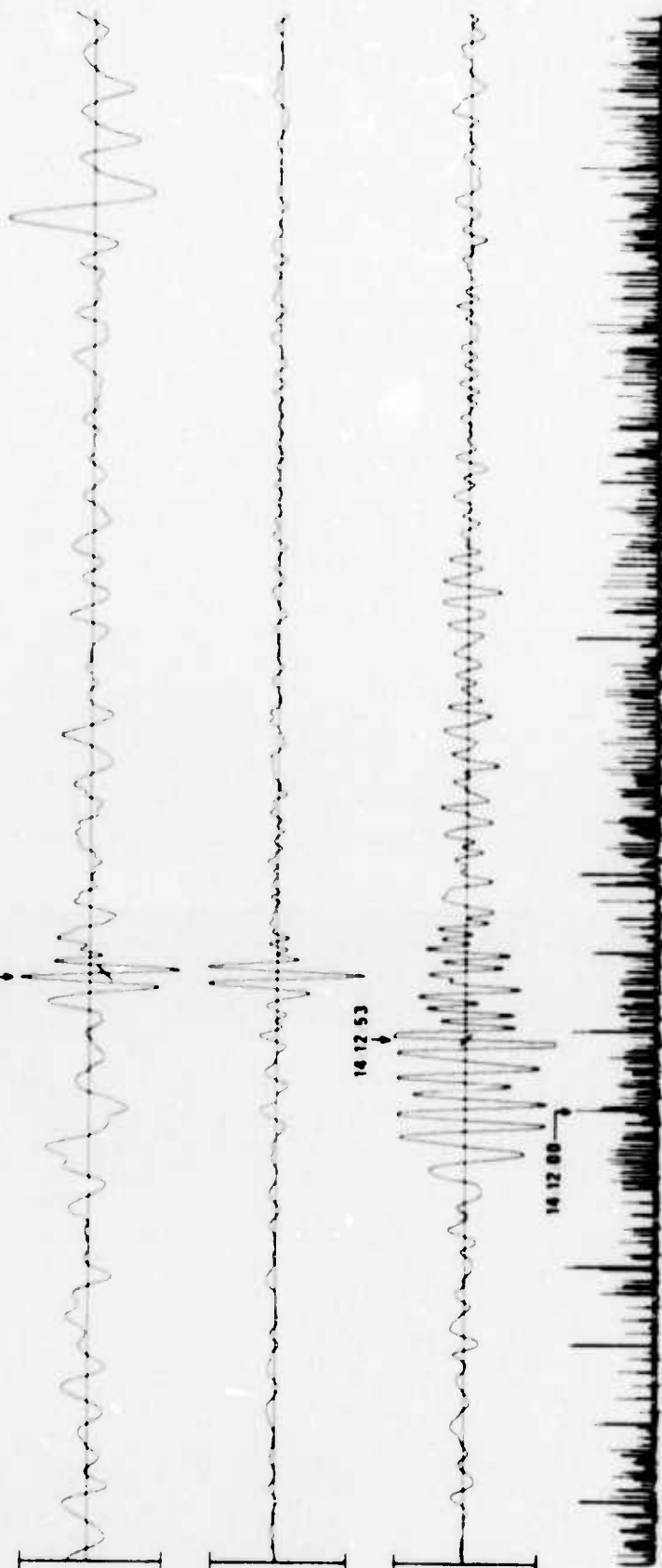
14 12 53

LPT  
UNKNOWN

14 12 00

TIME

2 MIN



CPSO 14 MAY 75

LPZ  
116618

14 15 28

LPR  
9794

14 13 45

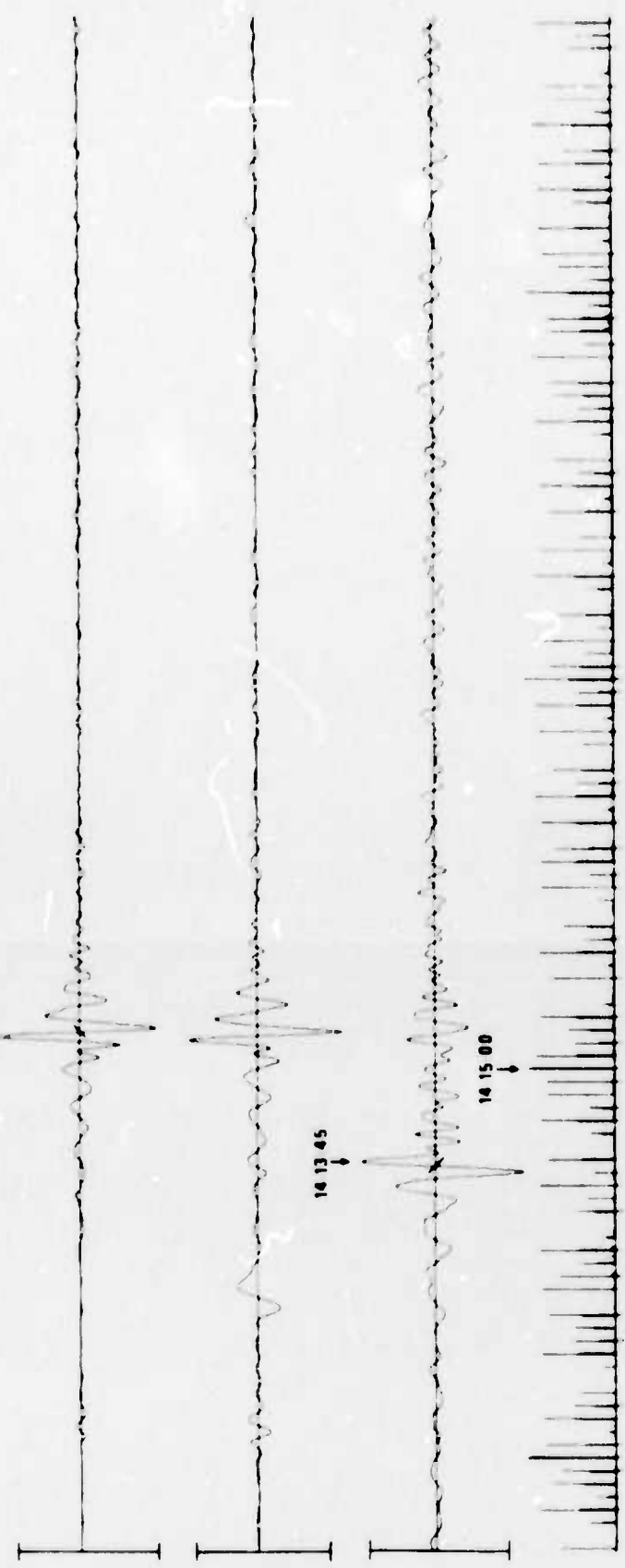
LPT  
9751

14 15 00

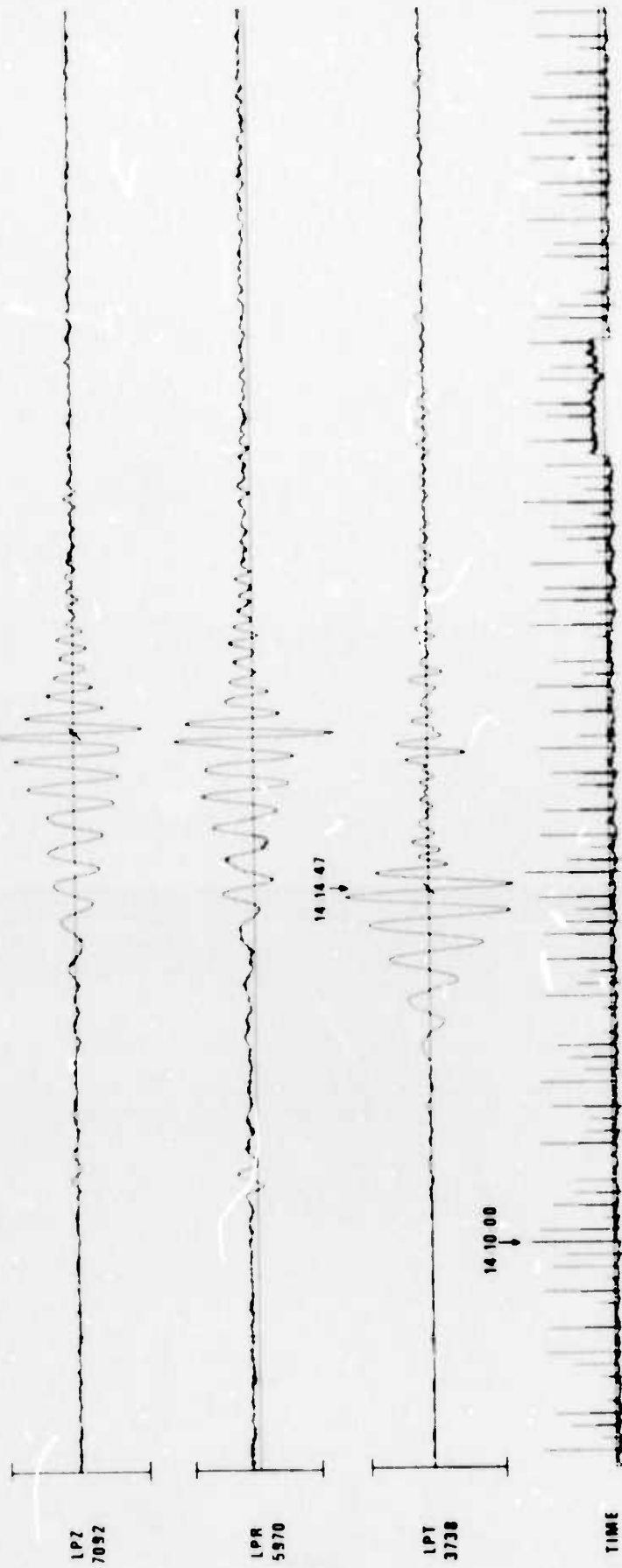
TIME

2 MIN

16.

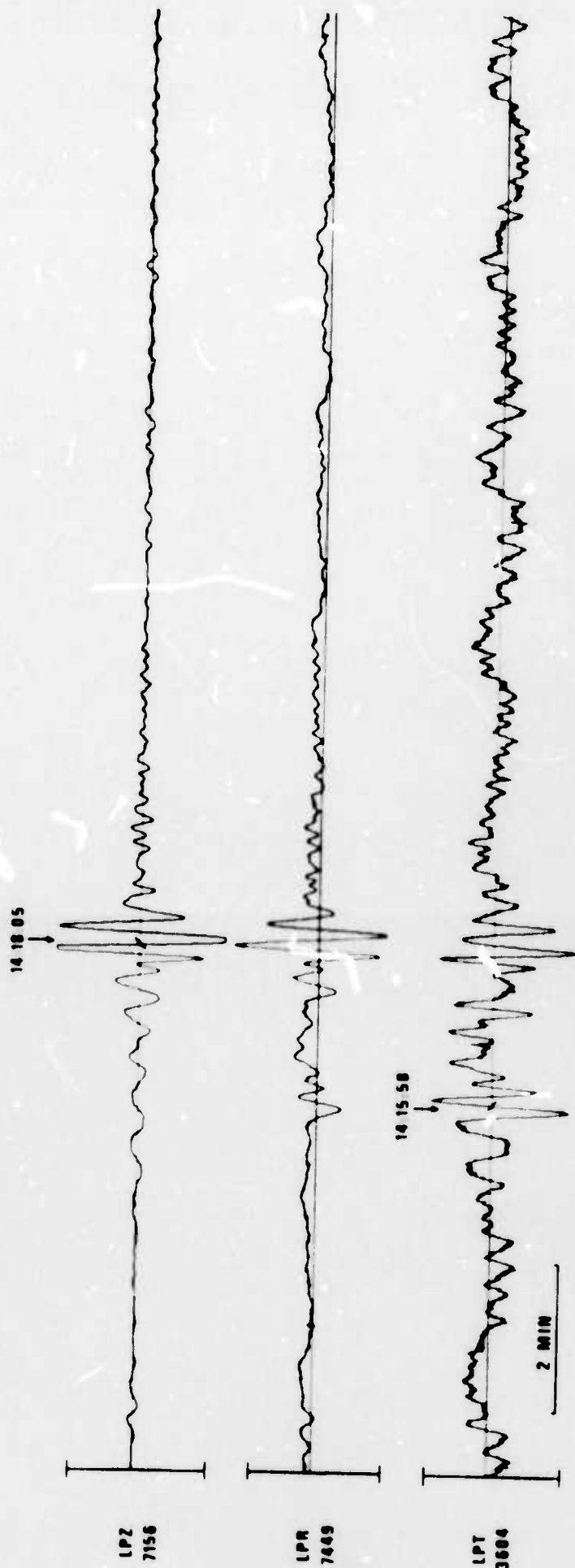


WH2YK 14 MAY 75



17.

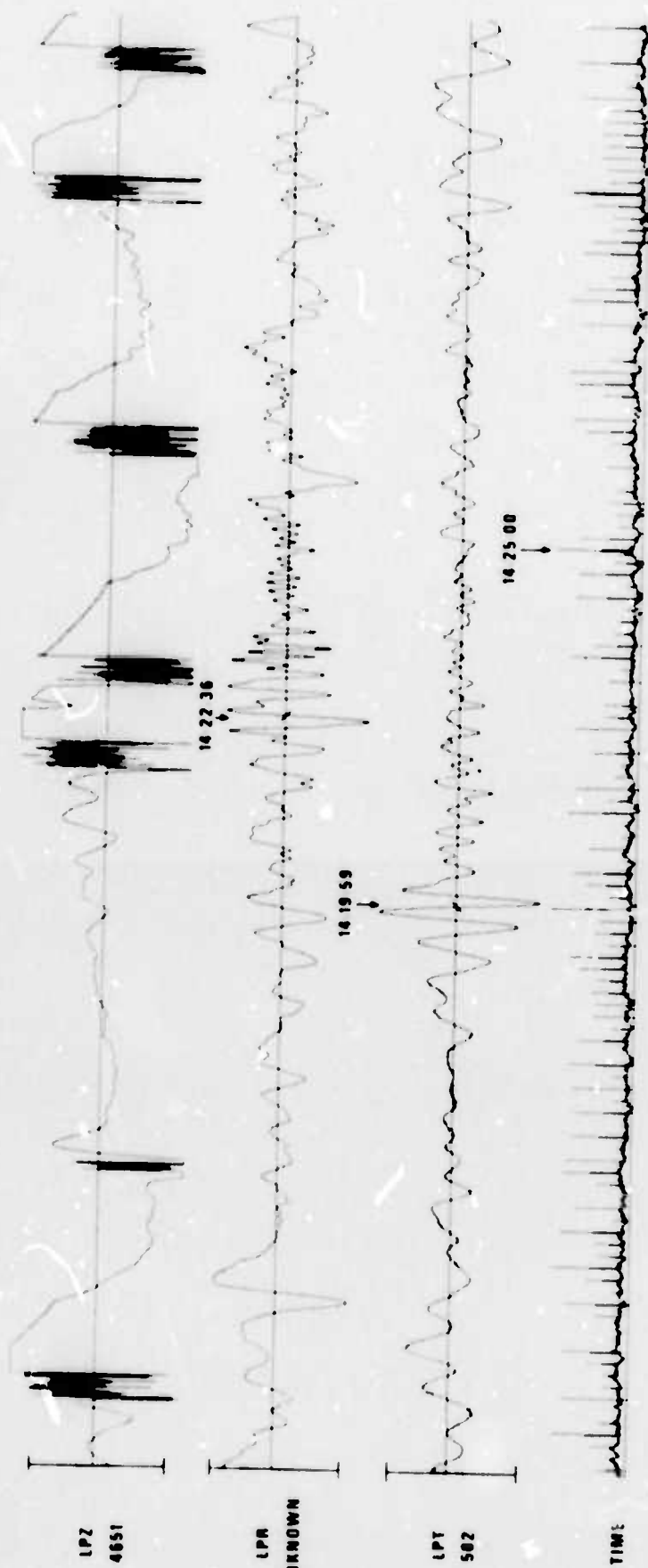
FN-WV 14 MAY 75



18.



HN-ME 14 MAY 75



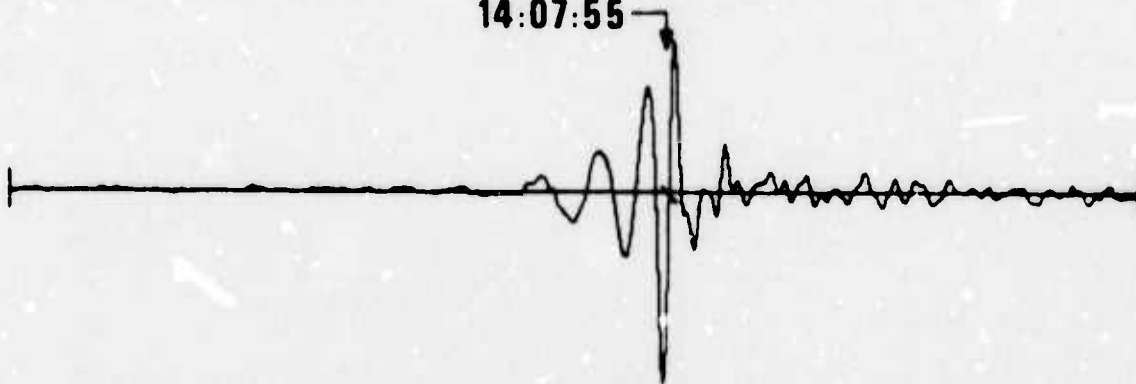
19.

LASA C4 SUBARRAY

14 MAY 75

14:07:55

LPZ



LPN



LPE

14:02:00



2 min

(No amplitude determinations made due to unresolved scaling problems.)

ALPA LONG PERIOD BEAMS 14 MAY 75

14:19:51

LP VERTICAL  
1910 mV

LP RADIAL  
1580 mV

LP TRANSVERSE  
1850 mV

1 min

14:11:51

HORIZONTAL ROTATION QUESTIONABLE

21.

NORSAR LONG PERIOD BEAMS 14 MAY 75

14:42:07

LP VERTICAL

508 mμ

LP RADIAL

366 mμ

LP TRANSVERSE

128 mμ

11 min

14:31:56

22.